

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

To:

See form PCT/ISA/220

Date of mailing
(day/month/year)

11/28/2003

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION

See paragraph 2 below

International application No.
PCT/DE2004/001604

International filing date (day/month/year)
7/22/2004

Priority date (day/month/year)
11/28/2003

International Patent Classification (IPC) or both national classification and IPC
B60Q1/52, B60T7/12

Applicant

ROBERT BOSCH GMBH

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☒ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☒ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/

Authorized officer

Lopez de Valle, J

Facsimile No.

Telephone No.

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/DE2004/001604

Box No. I Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ This opinion has been established on the basis of a translation from the original language into the following language _____, which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).

2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:

a. type of material

- ☐ a sequence listing
☐ table(s) related to the sequence listing

b. format of material

- ☐ in written format
☐ in computer readable form

c. time of filing/furnishing

- ☐ contained in the international application as filed.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority for the purposes of search.

3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

4. Additional comments:

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International application No.
PCT/DE2004/001604

Box No. II Priority

1. ☒ The following document has not yet been furnished:

☒ copy of the earlier application whose priority has been claimed (Rules 43*bis*.1 and 66.7(a)).

☐ translation of the earlier application whose priority has been claimed (Rules 43*bis*.1 and 66.7(b)).

Consequently it has not been possible to consider the validity of the priority claim. This opinion has nevertheless been established on the assumption that the relevant date is the claimed priority date.

2. ☐ This opinion has been established as if no priority had been claimed due to the fact that the priority claim has been found invalid (Rules 43*bis*.1 and 64.1). Thus for the purposes of this opinion, the international filing date indicated above is considered to be the relevant date.

3. Additional observations, if necessary:

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International application No.
PCT/DE2004/001604

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement

1. Statement

| | | | |
|-------------------------------|--------|-----|-----|
| Novelty (N) | Claims | 1-9 | YES |
| | Claims | | NO |
| Inventive step (IS) | Claims | / | YES |
| | Claims | 1-9 | NO |
| Industrial applicability (IA) | Claims | 1-9 | YES |
| | Claims | | NO |

2. Citations and explanations:

see supplementary page

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International application No.
PCT/DE2004/001604

Box No. VI Certain documents cited

1. Certain published documents (Rules 43bis.1 and 70.10)

Application No.
Patent No.

Publication date
(day/month/year)

Filing date
(day/month/year)

Priority date (valid claim)
(day/month/year)

2. Non-written disclosures (Rules 43bis.1 and 70.9)

Kind of non-written disclosure

Date of non-written disclosure
(day/month/year)

Date of written disclosure
referring to non-written disclosure
(day/month/year)

see form 210

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WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY
(SUPPLEMENTARY SHEET)

International file number
PCT/DE2004/001604

Re Point V.

Reasoned statement with regard to novelty, inventive step and industrial applicability; citations and explanations supporting such statement

1. Reference is made to the following documents:

D1: WO 03/006291 A (BOSCH GMBH ROBERT; HEINEBRODT MARTIN
(DE); KNOOP MICHAEL (DE); WILHEL) January 23, 2003
D2: US-A-5 467 072 (MICHAEL JOSEPH) November 14, 1995

2. The present Application does not meet the requirements of Article 33(1) PCT, because the object of Claims 1 through 9 does not involve an inventive step as defined by Article 33(3) PCT.

2.1 Document D1 discloses (the references in parentheses refer to this document) the following features of independent Claim 1:

Method (Figure 1) for warning the driver of a motor vehicle

- of a traffic situation involving an increased collision risk,
- signals of at least one object detector representing motion quantities of detected objects being suppliable (1) to an

analyzer device ((2), (10), p. 7, line 12 through p. 8, line 4);

- *signals of at least one motion sensor system of the host vehicle being suppliable to an analyzer device ((2), (10), p. 10, line 34 through p. 11, line 15),*
- the analyzer device precalculating all possible motion trajectories for all detected objects and for the host vehicle (implicit (3), (4), (11), p. 4, lines 25 - 30; p. 8, lines 19 - 33), and,
- when an imminent collision is recognized, a warning is issued to the driver ((7), p. 9, lines 27 - 31) that higher acceleration or deceleration values and/or change in acceleration or deceleration values are needed to avoid a collision ((9), p. 11, line 15 through p. 12, line 11).

The object of Claim 1 differs from D1 by the fact that the motion trajectories are precalculated taking into account maximum acceleration or deceleration values and maximum change in acceleration or deceleration values over time.

However, it is customary in the related art to use a maximum acceleration or a maximum deceleration for calculating motion trajectories, see D2, col. 7, line 63 through col. 8, line 36.

The object of Claim 1 is therefore not inventive.

- 2.2 The objection to the object of Claim 1 (method) due to lack of an inventive step also applies, *mutatis mutandis*, to the object of Claim 7 (corresponding device).

- 2.3 The additional features of Claim 2 represent no limitation of the object of Claim 1, because *the driver perceives the maximum acceleration values (deceleration values) or change in acceleration values (deceleration values) as just still comfortable* is not a technical feature, but a subjective perception of the driver.
- 2.4 The features of Claim 3, wherein different maximum values and maximum change values over time are provided for the longitudinal vehicle acceleration, the longitudinal vehicle acceleration [**sic; deceleration**], and the transverse vehicle acceleration are trivial.
- 2.5 The additional features of Claim 4, wherein the maximum acceleration (deceleration) values and the maximum change in acceleration (deceleration) values over time are variable as a function of the instantaneous vehicle velocity (V) are disclosed in D1 (p. 5, lines 15 - 23), because the triggering conditions are not constant, but will vary with the driver's activity, in which the instantaneous vehicle velocity is no doubt included.
- 2.6 The features of Claim 5, wherein the values are variable as a function of the driving situation recognized by the object detector are also disclosed in D1 (p. 5, lines 8 - 13), since the traffic situation or the instantaneous environment situation are recognized by the object detector.
- 2.7 The additional features of Claim 6 are indicated in D1 (p. 11, lines 21 through p. 12, line 11).
- 2.8 The additional features of Claim 8 and 9 are indicated in D1 (p. 10, line 34 through p. 11, line 15).

Re Point VI.

Certain citations attached

Certain published citations

Application No. EP-A-1 387 183 (BOSCH GMBH ROBERT)

Patent No. Publication date: 02/04/2004

Application date: 03/11/2003

Priority date: 08/02/2002 (DE 10235414)